

(FILE 'HOME' ENTERED AT 10:57:56 ON 15 SEP 2006)

FILE 'MEDLINE, CAPLUS, SCISEARCH' ENTERED AT 10:58:10 ON 15 SEP 2006

L1 35 S MANF
L2 1 S L1 AND PARKINSONS
L3 0 S MESEMPHALIC (A) ASTROCYTE (2A) NEUROTROPHIC (A) FACTOR
L4 10 S MESENCEPHALIC (A) ASTROCYTE (2A) NEUROTROPHIC (A) FACTOR
L5 5 DUP REM L4 (5 DUPLICATES REMOVED)
L6 0 S L5 AND PY<=2002
L7 24 S MANF AND PY<=2002
L8 21 DUP REM L7 (3 DUPLICATES REMOVED)
L9 1 S L7 AND NEUROTROPHIC
L10 1 S L7 AND NEURON
L11 0 S L7 AND MAMMALIAN
L12 28980 S SAARMA?/AU OR LAUREN?/AU OR LINHOLM?/AU OR TIMMUSK?/AU OR TUO
L13 0 S L12 AND L7
L14 0 S L12 AND L1
L15 1 S L4 AND L12
L16 37661 S SAARMA?/AU OR LAUREN?/AU OR LINDHOLM?/AU OR TIMMUSK?/AU OR TU
L17 0 S L16 AND L1
L18 1 S L16 AND L4
L19 945 S ARGININE (A) RICH (2A) PROTEIN
L20 3 S L19 AND MESENCEPHALIC

=> dup rem 120

PROCESSING COMPLETED FOR L20

L21 1 DUP REM L20 (2 DUPLICATES REMOVED)

=> d ibib abs

L21 ANSWER 1 OF 1 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2003268334 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12794311
TITLE: MANF: a new mesencephalic, astrocyte-derived
neurotrophic factor with selectivity for dopaminergic
neurons.
AUTHOR: Petrova Penka; Raibekas Andrei; Pevsner Jonathan; Vigo
Noel; Anafi Mordechai; Moore Mary K; Peaire Amy E; Shridhar
Viji; Smith David I; Kelly John; Durocher Yves; Commissiong
John W
CORPORATE SOURCE: Laboratories of Protein Chemistry, Molecular Biology & Cell
Biology, Prescient NeuroPharma Inc., 96 Skyway Avenue,
Toronto, Ontario, Canada M9W 4Y9.
SOURCE: . Journal of molecular neuroscience : MN, (2003 Apr) Vol. 20,
No. 2, pp. 173-88.
Journal code: 9002991. ISSN: 0895-8696.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200308
ENTRY DATE: Entered STN: 10 Jun 2003
Last Updated on STN: 19 Aug 2003
Entered Medline: 18 Aug 2003

AB We describe the discovery of a novel, 20 kDa, secreted human protein named
mesencephalic astrocyte-derived neurotrophic factor, or MANF. The
homologous, native molecule was initially derived from a rat
mesencephalic type-1 astrocyte cell line and recombinant MANF
subcloned from a cDNA encoding human arginine-rich
protein. MANF selectively protects nigral dopaminergic neurons,
versus GABAergic or serotonergic neurons. The discovery of MANF marks a
more systematic approach in the search for astrocyte-derived, secreted
proteins that selectively protect specific neuronal phenotypes. Compared
to glial cell line-derived neurotrophic factor (GDNF) and brain-derived

neurotrophic factor (BDNF), MANF was more selective in the protection of dopaminergic neurons at lower (0.05-0.25 ng/mL) and middle (0.5-2.5 ng/mL) concentrations: MANF>GDNF>BDNF. GDNF was more selective at higher concentrations (25-50 ng/ml): GDNF>MANF>BDNF. Two domains in MANF of 39-AA and 109-AA respectively, and eight cysteines are conserved from C. elegans to man. MANF is encoded by a 4.3 Kb gene with 4 exons, and is located on the short arm of human chromosome 3. The secondary structure is dominated by alpha-helices (47%) and random coils (37%). Studies to determine the localization of MANF in the brains of rat, monkey, and man, as well as the receptor, signaling pathways, and biologically active peptide mimetics are in progress. The selective, neuroprotective effect of MANF for dopaminergic neurons suggests that it may be indicated for the treatment of Parkinson's disease.

EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--|---|------------------|---------|------------------|
| L23 | 1 | "10/302172" and "949" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:45 |
| L22 | 1 | "10/302172" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:45 |
| L21 | 5 | "10302172" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:42 |
| L20 | 4 | mesencephalic adj astrocyte-derived neurotrophic adj (protein or polypeptide) and arginine adj2 rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:42 |
| S44 | 211 | mesencephalic adj astrocyte-derived neurotrophic adj (protein or polypeptide) | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L19 | 134 | mesencephalic adj astrocyte-derived neurotrophic adj (protein or polypeptide) and arginine | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L18 | 0 | l17 and l1 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L17 | 136 | arginine adj rich adj protein | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L16 | 820 | arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |

EAST Search History

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|-----|-----|---|---|----|-----|------------------|
| L15 | 0 | parkisons and arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L14 | 505 | parkisons | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L13 | 505 | parkison | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L12 | 0 | parkisons and arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:37 |
| L11 | 0 | parkisons same arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:36 |
| L10 | 12 | mesencephalic adj5 neurotrophic adj factor and parkinson | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:36 |
| L2 | 1 | manf and arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:36 |
| L1 | 13 | mesencephalic adj5 neurotrophic adj factor | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:36 |
| S3 | 1 | WO adj "200268638" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:35 |
| L9 | 1 | WO adj "200268638" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:35 |

EAST Search History

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|-----|------|---|---|----|-----|------------------|
| L8 | 3 | I3 and I6 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:34 |
| L7 | 0 | I2 and I3 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:34 |
| L6 | 3 | MANF2 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:32 |
| S12 | 1 | manf and arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:31 |
| S9 | 0 | MANF2 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:31 |
| S8 | 0 | MANF1 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:31 |
| S7 | 1610 | Saarma.in. or Lauren.in. or Linholm.in. or Timmusk.in. or Tuominen.in. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:31 |
| S6 | 8 | Drmanac.in. and arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:31 |
| L5 | 2 | MANF1 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:31 |
| L4 | 8 | Drmanac.in. and arginine adj rich | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:31 |

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| L3 | 2329 | Saarma.in. or Lauren.in. or Linholm.in. or Timmusk.in. or Tuominen.in. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/09/15 10:31 |
| S17 | 9 | mesencephalic adj5 neurotrophic adj factor | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/15 10:30 |
| S46 | 1 | wo adj "200119851" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/10 20:32 |
| S1 | 5 | "10302172" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/09/10 20:32 |